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PATENT SPECIFICATION

DRAWINGS ATTACHED

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924,503



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COMPLETE SPECIFICATION

Improvements in or relating to Liquid Applicators

5 We, J. GODDARD & SONS LIMITED, a British Company, 15—35, Nelson Street, Leicester, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

10 This invention is for improvements in or relating to liquid applicators and has for one of its objects to provide a simple and convenient device suitable for use in relatively inaccessible places.

15 In accordance with the invention there is provided an applicator comprising a shallow closed container providing a liquid retaining space between opposite walls which are joined in liquid tight manner at their edges, one wall being provided with a filler opening and the other wall being formed with a dispensing aperture or apertures and an absorbent pad attached externally to that wall which is formed with the dispensing aperture or apertures. The pad is conveniently attached to the container only along its edges and is preferably of approximately the same size and shape as the outline of the container. The filler opening is provided with a liquid tight closure cap. In use the container is charged with liquid to be applied through the pad and the filler opening is closed. The applicator can then be held in the hand or otherwise and its pad applied to and moved over the surface to which the liquid is to be applied. Such movement causes the liquid to be dispensed in appropriate amount from the liquid container on to the pad and from the pad on to the surface, a pump like action being set up to introduce air into the container in appropriate quantity to replace the dispensed liquid.

40 In a preferred construction the liquid container is constituted by a double walled bag of waterproof material forming a mitt and providing the liquid retaining space between its internal and external walls, the filler opening and the dispensing aperture or apertures be-

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ing formed respectively in the opposite external walls. Such mitt type applicator may be worn on the users hand by means of which it can be applied to and moved over the surface to which the liquid is to be applied.

The pad is conveniently of sponge like structure so that on compressing and releasing it during the normal motion of wiping it over a surface, a pumping action is set up to extract liquid on to the pad from the liquid container.

Certain preferred forms of construction incorporating the invention are illustrated by way of example in the accompanying drawings and will now be described with reference to the drawings in which:—

Figure 1 is a plan view of one form of applicator as seen from one face thereof,

Figure 2 is a similar view as seen from the opposite face,

Figure 3 is an enlarged cross sectional side view,

Figure 4 is a view of a laid out structure used in forming the applicator of Figs. 1 to 3, with a portion of the pad turned back to disclose other parts and

Figure 5 is a side view in cross section of an alternative form of pad in accordance with the invention.

There is shown in Figs. 1 to 3 a mitt type of applicator having a front or bottom wall 10 and a back or top wall 11 formed of plastic sheets, for example of polyethylene, which are joined together along two relatively straight side portions and a part circular front portion of their edges by plastic seaming indicated at 12. The walls 10 and 11 have continuations indicated at 10a and 11a in Figures 3 and 4 which are similarly seamed around their edges and are turned inside out within the walls 10 and 11. This manner of construction is illustrated more clearly in Fig. 4 which shows the laid out sheets with the portions 10 and 10a uppermost and the edge seaming 12 extending continuously around the assembled sheets the parts to the right of Fig. 4 being subsequently

turned inside out to insert them within the parts to the left of that Figure so as to result in the structure shown in cross section in Fig. 3. There is thus formed between the front and back walls 10 and 11 and externally of the inner pouch formed by the wall portions 10a and 11a a liquid retaining space 13.

The back wall 11 is formed with a filling opening 14 surrounded by a plastic bush 15 which is fitted with a detachable sealing plug 16. The bottom or forward wall 10 has at least one small aperture as indicated at 17 formed in it, and preferably has a plurality of such apertures at spaced apart positions. The apertured wall 10 is covered by a two layered pad indicated generally at 18 and comprising an under layer of open cell foam plastic indicated at 19 and a covering sheet 20 conveniently of knitted nylon fabric, being similar in construction to the applicator pad described in our co-pending Patent Application No. 11230/58 (Serial 916,031). The pad 18 is secured peripherally to the wall 10 by plastic welding or seaming along the weld joint 12 at its curved end and sides and along a transverse line 21 towards the rearward part of the pad. Figures 1 and 2 show the appearance of the completed applicator as seen from the back and front respectively.

During use, the applicator of Figs. 1 to 4 is placed on the user's hand in the manner of a glove, or it may be used on a foot or on a flat plate like holder of appropriate shape. The liquid space 13 having been charged with liquid for application by the pad the plug 16 is replaced to close the filling aperture leaving the holes 17 as the only escape route for the liquid. The pad is moved to and fro over a surface to which the liquid is to be applied and such movement causes the liquid to be dispensed in appropriate amount from the liquid containing space 13 on to the pad 18 and from the pad on to the surface being treated. As the pad is pressed against such surface a pumping action is set up through compression of the foam plastic material 19 of the pad to introduce air into the liquid containing space 13 in appropriate quantity to replace the dispensed liquid.

In a modified form of construction shown in Fig. 5 the applicator has its body formed by two flexible plastic sheets 22 and 23 joined together in liquid tight manner around their edges as by plastic welding at 24 and having a composite pad 25 similar to the pad 18 fixed to the sheet 23 around its edges. The sheet 22 is formed with a filling opening 26 surrounded by a boss 27 which receives a removable closure plug 28, and the sheet 22 also conveniently has attached to it a plastic strap 29 welded at its ends 30 to the sheet 22. In this construction there is no re-entrant pocket in the pad and the whole of the space between the sheets 22 and 23 forms the liquid container, the discharge from which occurs

through small apertures 31 formed in the sheet 23. This form of applicator is used in the same manner as the one earlier described except that it is held externally by the hand or otherwise for example by passing the fingers under the strap 29 or in some other way such as by grasping the outer parts of the applicator or a handle of different form attached to the sheet 22.

It will be appreciated that both forms of applicator described have the useful advantage of being readily capable of being moved into sharp corners and through narrow spaces to reach otherwise inaccessible areas to which liquid is required to be applied.

WHAT WE CLAIM IS:—

1. A liquid applicator comprising a shallow closed container providing a liquid retaining space between opposite walls which are joined in liquid tight manner at their edges, one wall being provided with a filler opening and the other wall being formed with a dispensing aperture or apertures, and an absorbent pad attached externally to that wall which is formed with the dispensing aperture or apertures.

2. An applicator according to Claim 1 wherein the pad is attached to the container only along its edges and is of approximately the same size and shape as the outline of the container.

3. An applicator according to Claim 1 or Claim 2 wherein the filler opening is provided with a liquid tight closure cap.

4. An applicator according to any of the preceding Claims wherein the liquid container is constituted by a double walled bag of waterproof material forming a mitt and providing the liquid retaining space between its internal and external walls, the filler opening and dispensing aperture or apertures being formed respectively in the opposite external walls.

5. An applicator according to any of the preceding Claims wherein the pad is conveniently of sponge-like structure so that on compressing and releasing it during the normal motion of wiping it over a surface, a pumping action is set up to extract liquid on to the pad from the liquid container.

6. An applicator according to Claim 4 having the bag formed of sheet plastic and constructed from two superposed elongated sheets with curved ends the edges of which are seam welded together and with one end portion turned inside out within the other to provide the container between the two end portions of the bag.

7. An applicator according to Claim 6 having a composite pad comprising an inner layer of foam plastic and an outer layer of nylon fabric, the pad being attached along its edge to the seam welded periphery of the bag at the end thereof which is to remain outermost.

8. An applicator according to Claim 7

wherein the pad is secured to the periphery of the bag by plastic welding.

9. Liquid applicators constructed substantially as hereinbefore described with reference
5 to the accompanying drawings.

ERIC POTTER & CLARKSON,
Chartered Patent Agents.

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924503

COMPLETE SPECIFICATION

1 SHEET

*This drawing is a reproduction of
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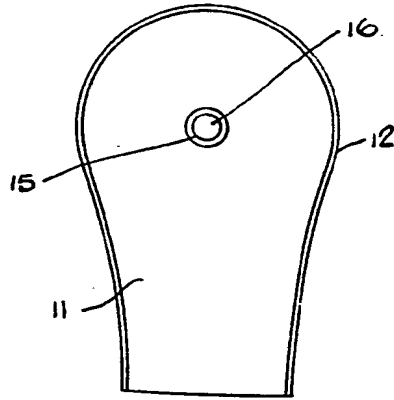


FIG. 1.

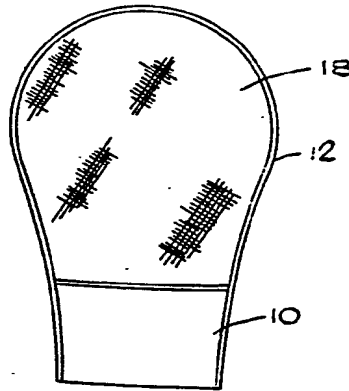


FIG. 2.

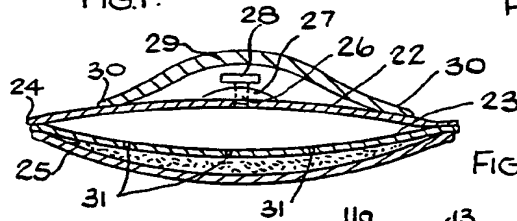


FIG. 5.

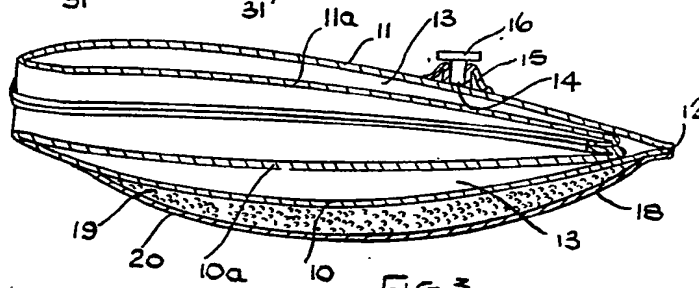


FIG. 3.

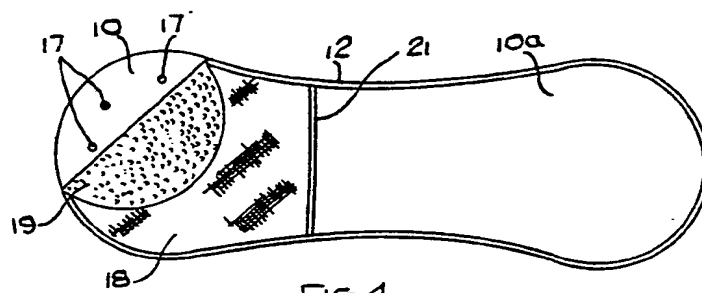


FIG. 4.